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AMENDED APPLICATION (ARTICLE 34)

**TITLE: SEMICONDUCTOR MEMORY CARD, AND
ACCESSING DEVICE AND METHOD**

(Amended) CLAIMS

1. (Amended) A semiconductor memory card which is
used in connecting to an access device, comprising:

5 a host interface which transmits a control signal and
data to the access device and receives a signal from the
access device;

 a nonvolatile memory in which a plurality of
continuous sectors are grouped into an erase block as a
10 minimum unit for data erasing and which includes an address
management information area and user data area;

 a memory controller which controls erasing, writing
and reading of data for said nonvolatile memory;

 a memory for a card information storage including a
15 card information storage part which stores information on
access condition as condition at least at the time when
said access device accesses said semiconductor memory card
and access performance which said semiconductor memory card
realizes when said access device performs access on said
20 access condition, and

 a control part which controls each part on the basis
of the control signal acquired via said interface.

2. (Amended) The semiconductor memory card according
25 to claim 1, wherein said card information storage part

stores

first information on physical characteristics of in
said semiconductor memory card, and at least one of

second information on access condition,

5 third information on said access rate of said
semiconductor memory card as information on said access
performance, and

fourth information on abnormal process of said
semiconductor memory card.

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3. The semiconductor memory card according to claim
2, wherein said third information in said card information
storage part includes

a flag representing rate performance of said
15 semiconductor memory card as said information on access
rate.

4. (Amended) The semiconductor memory card according
to claim 1, wherein said card information storage part
20 stores at least

first information on physical characteristics in said
semiconductor memory card,

second information on said access condition, and

third information on access rate of said
25 semiconductor memory card as information on said access

performance.

5. The semiconductor memory card according to claim 4, wherein

5 said control part, in response to a request from said access device, reads information on access condition for accessing said semiconductor memory card, and information on access rate when accessing to said semiconductor memory card on said access condition from said card information
10 storage part, and transmits the information to said access device.

6. The semiconductor memory card according to claim 4, wherein

15 said control part, in response to information on access condition designated by said access device, reads information on access rate when accessing the semiconductor memory card on said access condition from said card information storage part, and transmits the information to
20 said access device.

7. The semiconductor memory card according to claim 4, wherein

 said control part, in response to information on
25 access rate designated by said access device, reads

information on access condition to said semiconductor memory card required to meet said access rate from said card information storage part, and transmits the information to said access device.

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8. The semiconductor memory card according to claim 4, wherein

said control part, when reading information on access condition designated by said access device and information
10 on access rate from said card information storage part and accessing said semiconductor memory card on said access condition, determines whether or not the access rate is met and transmits a determination result to said access device.

15 9. The semiconductor memory card according to claim 4, wherein the third information in said card information storage part includes

a flag representing rate performance of said semiconductor memory card as said information on access
20 rate.

10. The semiconductor memory card according to claim 4, wherein

said card information storage part has information on
25 access rate of said semiconductor memory for a plurality of

levels of power consumption of said semiconductor memory card as said third information, and

said control part, in response to a request from said access device and designation of power consumption level, reads information on access condition for accessing said semiconductor memory card and information on access rate when accessing said semiconductor memory card on said access condition from said card information storage part, and transmits the information to said access device.

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11. The semiconductor memory card according to claim 4, wherein

said card information storage part has information on access rate of said semiconductor memory for a plurality of levels of power consumption of said semiconductor memory card as said third information, and

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said control part, in response to information on access condition designated by said access device and designation of power consumption level, reads information on access rate when accessing said semiconductor memory card on said access condition and designated electrical power consumption level from said card information storage part, and transmits the information to said access device.

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25 12. The semiconductor memory card according to claim

4, wherein

said card information storage part has information on
access rate of said semiconductor memory for a plurality of
levels of power consumption of said semiconductor memory

5 card as said third information, and

said control part, in response to information on
access rate designated by said access device and
designation of power consumption level, reads information
on access condition to said semiconductor memory card

10 required to meet said access rate from said card
information storage part, and transmits the information to
said access device.

13. The semiconductor memory card according to claim

15 4, wherein

said card information storage part has information on
access rate of said semiconductor memory for a plurality of
levels of power consumption of said semiconductor memory
card as said third information, and

20 said control part reads information on access
condition designated by said access device and information
on designation of power consumption level and access rate
from said card information storage part, determines whether
or not said access rate is met when accessing said

25 semiconductor memory card on said access condition and

designated electrical power level, and transmits a determination result to said access device.

14. The semiconductor memory card according to claim
5 1, wherein

said card information storage part has an access performance basic information list which holds various process time and process unit size in said semiconductor memory card according to an access method, and

10 in response to a request from said access device, said control part transmits said access performance basic information list to said access device.

15. The semiconductor memory card according to claim
15 1, wherein said card information storage part

holds process unit size of said semiconductor memory card, access method and access rate in the case where access condition containing process contents are changed, and

20 in response to request of said access device, said control part transmits information on said access rate to said access device.

16. (Amended) An access device for accessing a
25 semiconductor memory card in which a plurality of

continuous sectors are grouped into a block as a minimum unit for data erasing and stored data is managed according to a file system comprising:

- 5 a card information acquisition part for acquiring
information on access condition as condition at the time
when said access device accesses said semiconductor memory
card and access performance which said semiconductor memory
card realizes when said access device performs access on
said access condition from said semiconductor memory card;
- 10 a card use condition storage part for storing
information on access condition which can be used when said
access device accesses said semiconductor memory card and
information on access rate desirable for said semiconductor
memory card;
- 15 an access condition determination part for
determining access condition on the basis of the
information acquired by said card information acquisition
part, information on access performance of said
semiconductor memory card and information stored in said
20 card use condition storage part;
- a file system control part for acquiring access
condition determined by said access condition determination
part and performing file access suitable for said access
condition; and
- 25 an access control part for accessing said

semiconductor memory card in response to an access request from said file system control part.

17. The access device according to claim 16, wherein
5 said access condition determination part divides an area of said semiconductor memory card in file system access units (hereinafter referred to as FS access unit) on the basis of the information on access performance acquired from said semiconductor memory card.

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18. The access device according to claim 17, wherein
said file system control part, when recording file data on said semiconductor memory card, determines a continuous free area having a length of multiples of said FS access
15 unit on the basis of management information of a file system constructed on said semiconductor memory card, and records the file data in said determined continuous free area.

20 19. The access device according to claim 17, wherein
said file system control part, when recording new file management information on said semiconductor memory card, determines whether or not another file management information is recorded in the area of said FS access unit
25 on the basis of management information of the file system

constructed on said semiconductor memory card and a free area for writing new file management information therein exists, and when the free area exists, determines said free area as a writing position of file management information, 5 and records the file management information in said determined free area.

20. The access device according to claim 17, wherein said file system control part, when the areas of a 10 plurality of said FS access units are partially used, moves data in the used areas of partially used FS access units to an unused area of the other FS access unit on the basis of management information of a file system constructed on said semiconductor memory card.

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21. The access device according to claim 17, wherein said file system control part calculates the number of areas in which the whole of said FS access unit is the free area on the basis of management information of the 20 file system constructed on said semiconductor memory card.

22. (Amended) An access method for accessing a semiconductor memory card in which a plurality of continuous sectors are grouped into a block as a minimum 25 unit for data erasing and stored data is managed according

to the file system comprising:

a card use condition storage step for storing
information on access condition which can be used when
accessing said semiconductor memory card and information on
5 access rate desirable for said semiconductor memory card;

a card information acquisition step for acquiring
information on access condition as condition at the time
when said access device accesses said semiconductor memory
card and access performance which said semiconductor memory
10 card realizes when said access device performs access on
said access condition from said semiconductor memory card;

an access condition determination step for
determining access condition on the basis of the
information acquired in said card information acquisition
15 step and information stored in said card use condition
storage step; and

a file system control step for acquiring access
condition determined in said access condition determination
step and accessing a file in said semiconductor memory card
20 so as to meet said access condition.

23. The access method according to claim 22, wherein
said access condition determination step determines a file
system access unit (hereinafter referred to as FS access
25 unit) as a size used when accessing said semiconductor

memory card according to said access condition.

24. The access method according to claim 23, wherein
when recording file data on said semiconductor memory
5 card, said file system control step determines a continuous
free area having a length of multiples of said FS access
unit on the basis of management information of the file
system constructed on said semiconductor memory card, and
the file data is recorded in said determined
10 continuous free area.

25. The access method according to claim 23, wherein
when recording new file management information on
said semiconductor memory card, said file system control
15 step determines whether or not another file management
information is recorded in the area of said FS access unit
on the basis of management information of the file system
constructed on said semiconductor memory card and a free
area for writing new file management information therein
20 exists, and

when the free area exists, said space area is
determined as a writing position of file management
information and records the file management information in
said determined free area.

26. The access method according to claim 23, wherein
when the areas of a plurality of said FS access units
are partially used, said file system control step moves
data in the used areas of partially used FS access units to
5 an unused area of the other FS access unit on the basis of
management information of the file system constructed on
said semiconductor memory card.

27. The access method according to claim 23, wherein
10 said file system control step calculates the size of
an area in which the whole of said access unit is a free
area on the basis of management information of the file
system constructed on said semiconductor memory card, and
the calculated value is informed as a free area
15 length of said semiconductor memory card to an application
program.